

# The Custom-Made Linear Motion System

Customized linear motion technology. Based on our proven Extrusion and Fastening Technology, we have developed Linear Motion Units that meet the highest customer expectations in terms of versatility, stability and efficiency.

Robotunits offers a Linear Motion System of the highest quality and precision, with a maximum potential for cost and time savings in design and assembly.



## Fully integrated Linear Motion System

- completely compatible with the entire Modular Automation System
- belt return inside the extrusion
- leaves 3 sides of the extrusion free for additional attachments
- available in 50 mm series



## It runs and runs and runs ...

- single or double idlers can be used, depending on the load
- high strength due to special captive design of idler extrusion
- large rollers
- integrated fastening option for Flexible Energy Chain



## Guiderails instead of guide systems

- easily mounted guiderails eliminate the need for a separate guide system
- playfree datum edge positioning
- hardened, tempered steel guiderail allow heavier loads
- high wear resistance allows smooth and quiet operation
- quick and easy assembly



## Modular design of linear motion units

- customized linear motion units, from single units to complex 3 axis gantry systems
- single and multiple guiderails available in one system
- X-,Y-,Z-combinations possible
- almost limitless combinations



## Drive options

- motor selection tailored to performance requirements
- minimal design time through expansion coupling system
- one size pulley for all chassis sizes



## Protection against damage

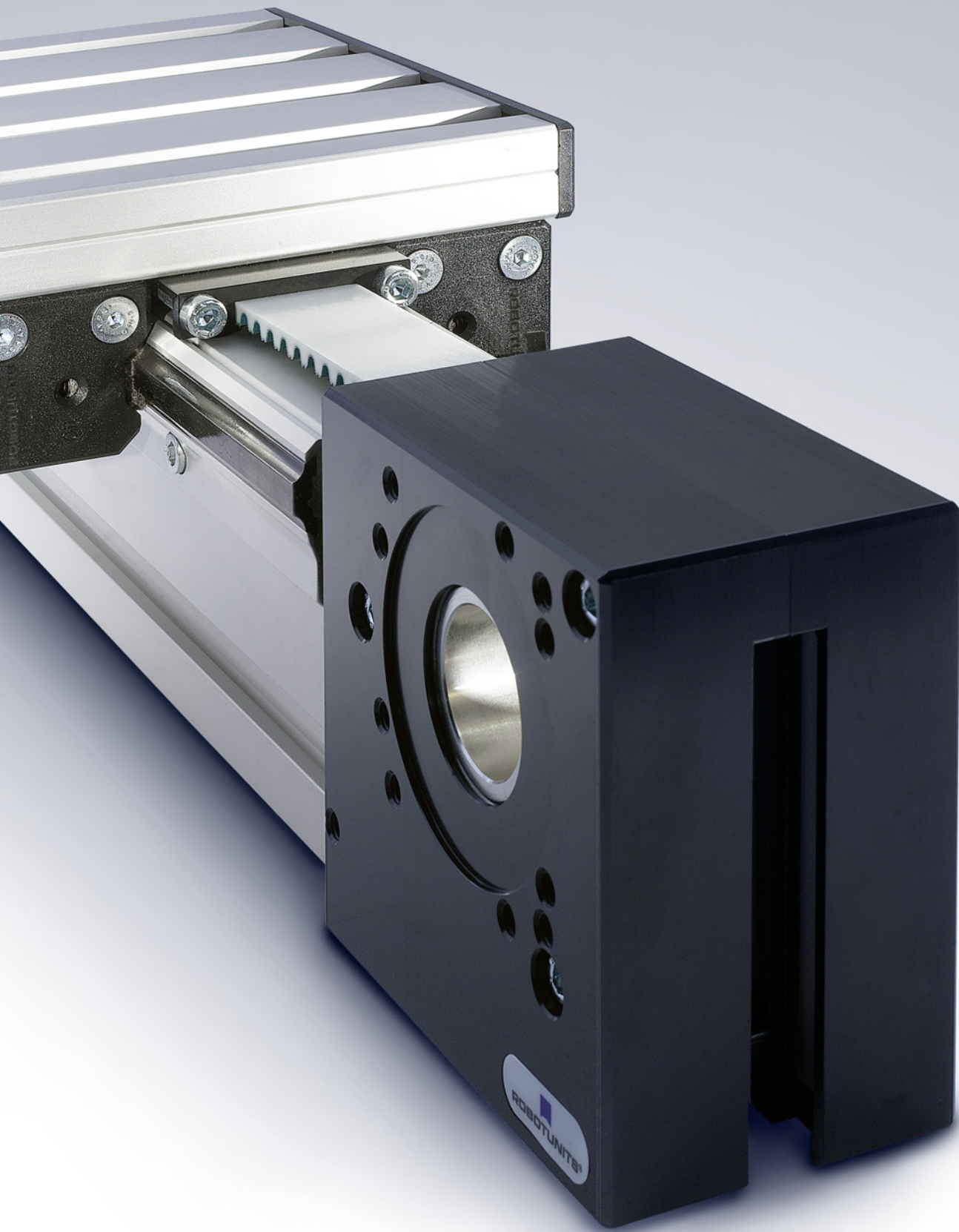
- integrated overrun protection prevents mechanical damage

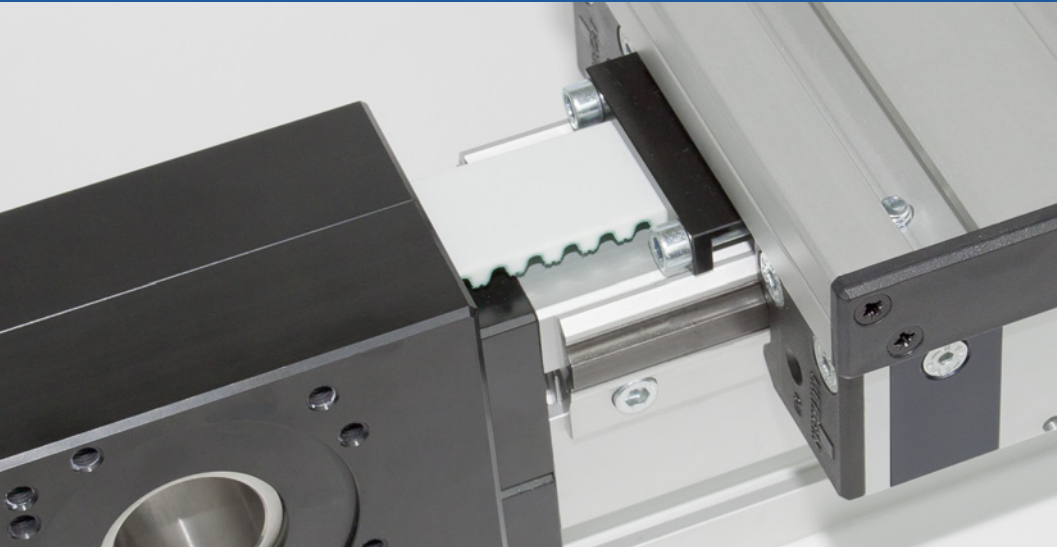
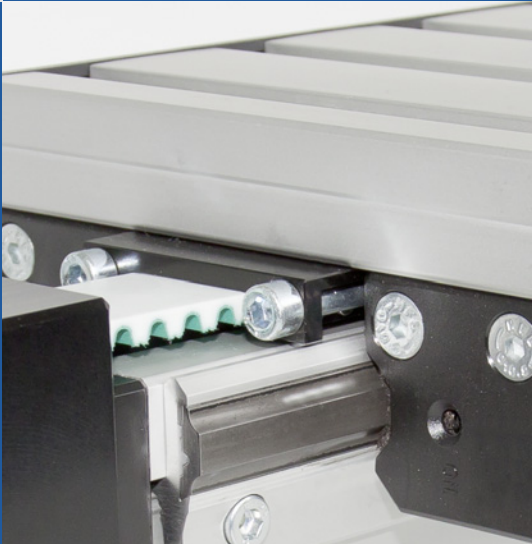
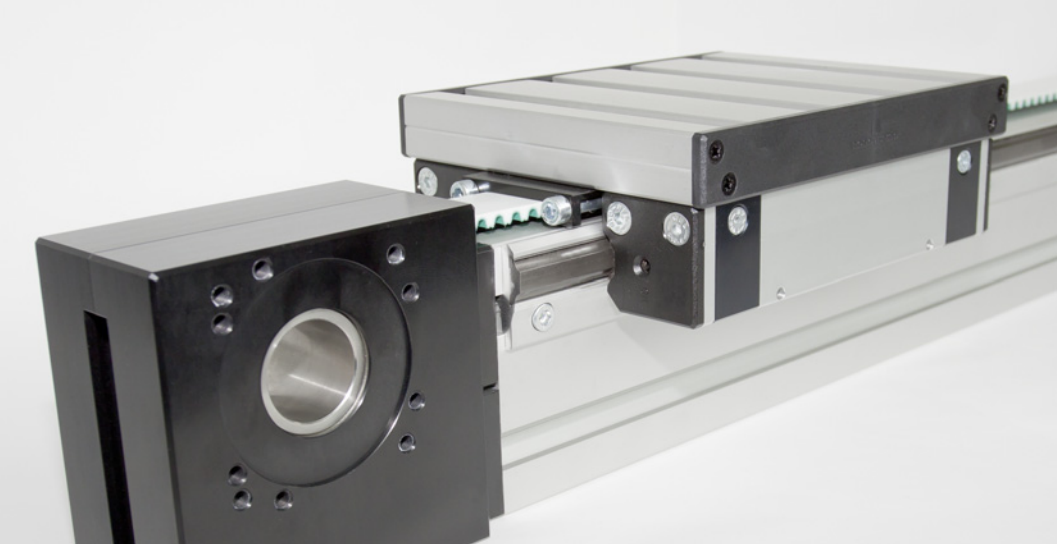


## Save time, cut cost

- easy selection of components
- easy to order
- minimal design time required
- quick and easy attachment of accessories
- easy installation







# The Custom-Made **Linear Motion System**

**Linear Motion Unit 50**

Page 64

Linear Motion  
Unit LIL 5010  
Page 66



**Linear Motion Unit 100**

Page 64

Linear Motion  
Unit LIL 1010  
Page 67



**Linear Motion Unit 50 With Omega Drive**

Page 68

Linear Motion  
Unit LOL 5010  
Page 68

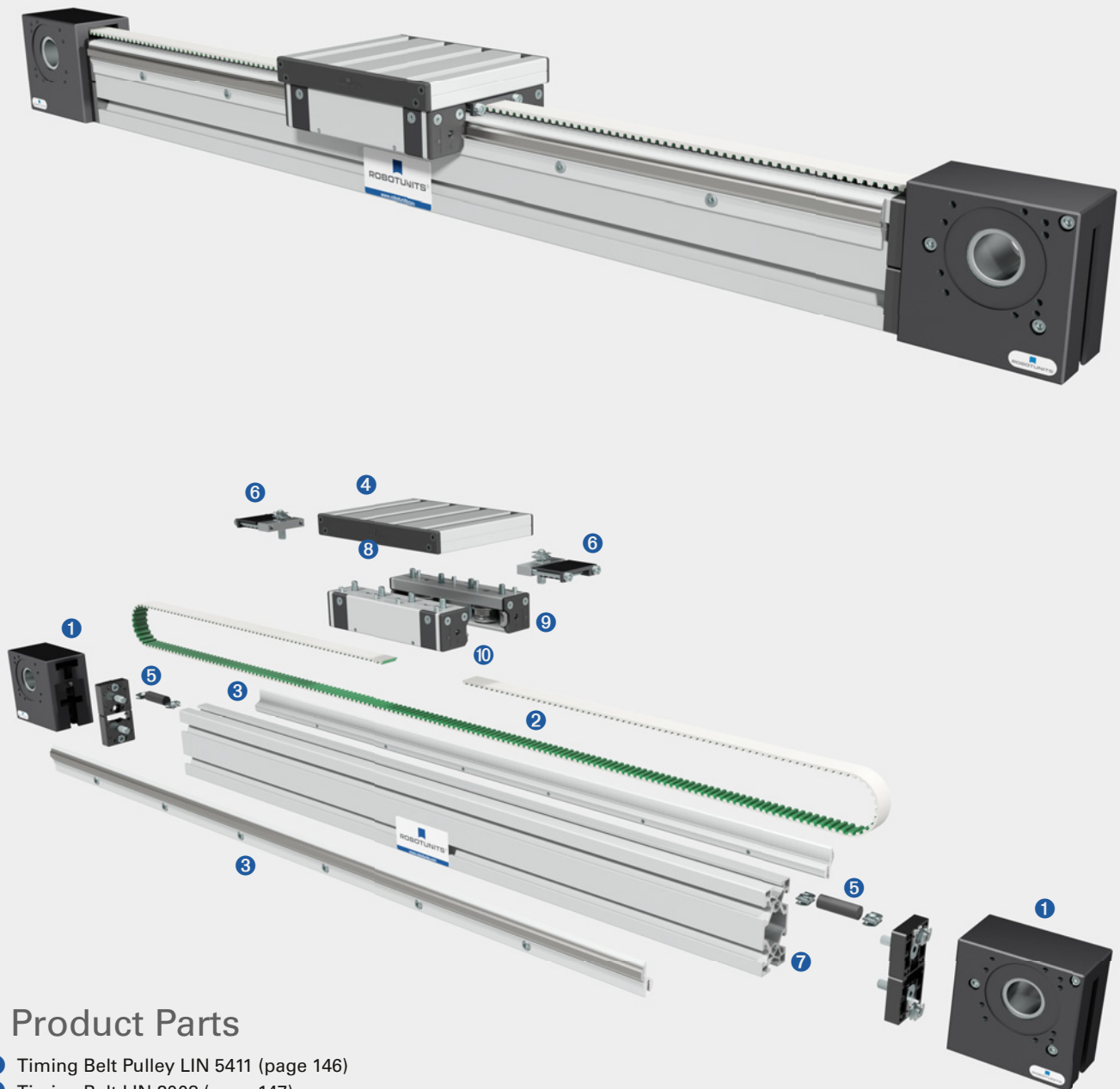


**Lift Station Request Form**

Page 71

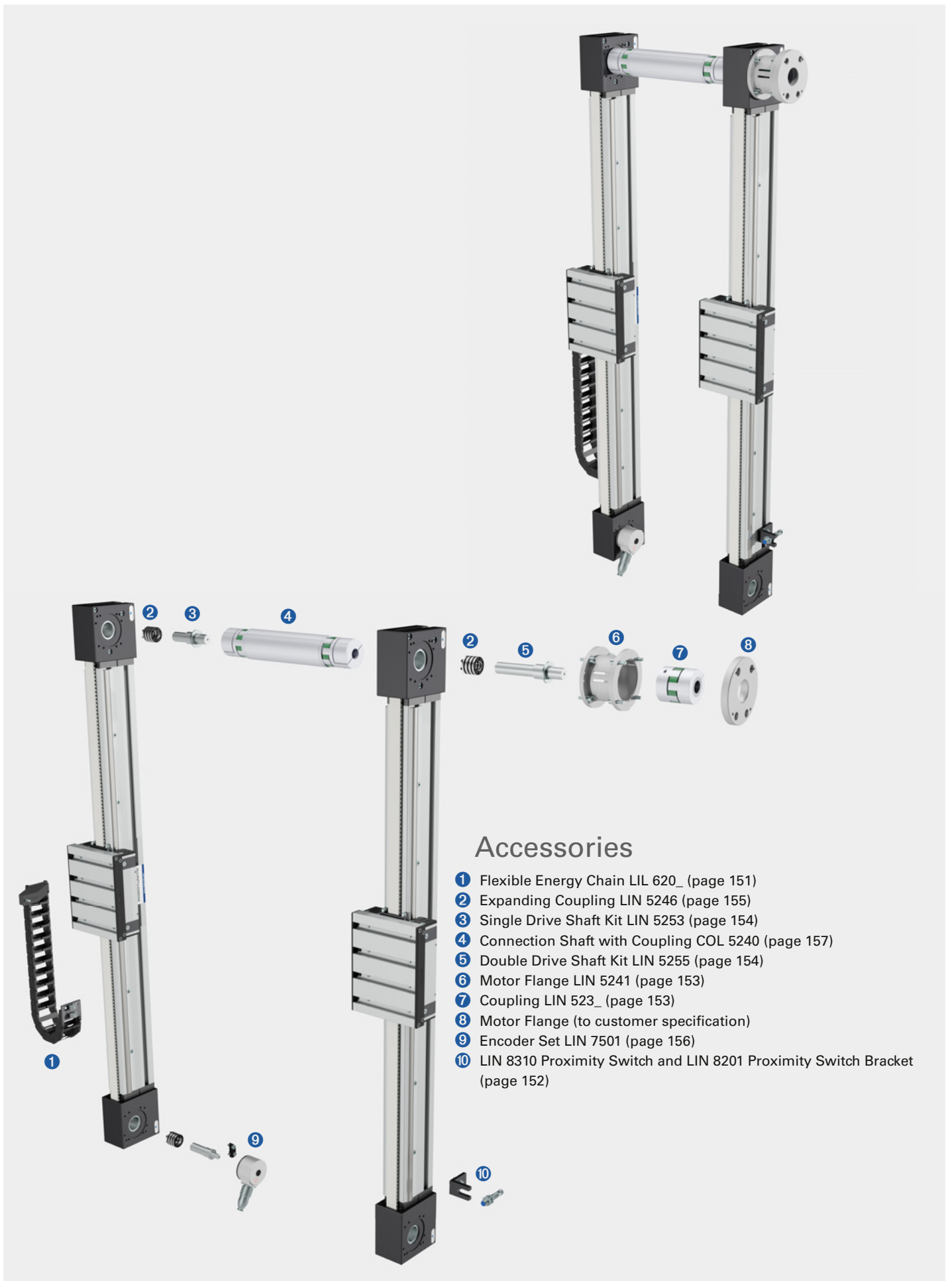
**Linear Motion Accessories Overview**

Page 123



## Product Parts

- ① Timing Belt Pulley LIN 5411 (page 146)
- ② Timing Belt LIN 3008 (page 147)
- ③ Guiderail LIL 5000 SNN (page 149)
- ④ Carriage Plates LIN 1501 / LIN 2001 (page 150)
- ⑤ Limit Stop LIN 5191 (page 150)
- ⑥ Timing Belt Clamp LIN 3221 (page 147)
- ⑦ Extrusions, 50x50, 50x100, 50x200, or 100x100 (starting page 96)
- ⑧ End Cap CAP 2521 (page 158)
- ⑨ Single Idler Kit, concentric LIN 5001 or Double Idler Kit, concentric LIN 5011 (page 148)
- ⑩ Single Idler Kit, eccentric LIN 5003 or Double Idler Kit, eccentric LIN 5013 (page 148)



## Accessories

- 1 Flexible Energy Chain LIL 620\_ (page 151)
- 2 Expanding Coupling LIN 5246 (page 155)
- 3 Single Drive Shaft Kit LIN 5253 (page 154)
- 4 Connection Shaft with Coupling COL 5240 (page 157)
- 5 Double Drive Shaft Kit LIN 5255 (page 154)
- 6 Motor Flange LIN 5241 (page 153)
- 7 Coupling LIN 523\_ (page 153)
- 8 Motor Flange (to customer specification)
- 9 Encoder Set LIN 7501 (page 156)
- 10 LIN 8310 Proximity Switch and LIN 8201 Proximity Switch Bracket (page 152)



**Application**

- For transportation and exact positioning of parts.
- Used as individual units or x-y-z gantries

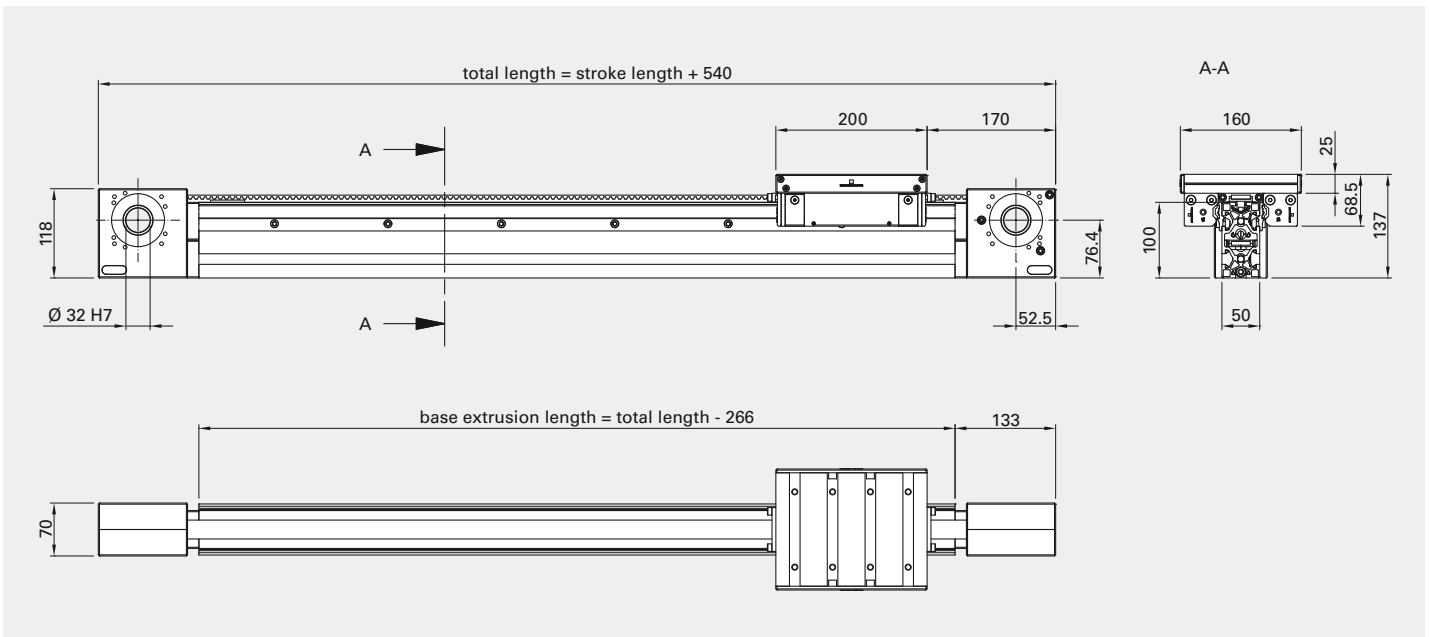
**Technical Data**

Base extrusion: 50x100 PIL 5010  
 Standard carriage plate: 200x150 mm  
 Md max.: 60 Nm (max. transmittable drive torque)  
 Carriage stroke per revolution: 200 mm  
 Pitch circle diameter: 63.66 mm  
 Idle torque: 1 Nm  
 Positioning accuracy:  $\pm 0.2$  mm (without drive backlash)  
 Weight of carriage: 2.66 kg

**Assembly Instructions**

See page 181

The Wrench LIN 9990 (page 149) is needed to adjust the eccentric roller

**Order Code**

Description	Order Code <sup>1)</sup>		
	Base Extrusion	Type	Stroke Length
Standard Linear Motion Unit, Base Extrusion PIL 5010	LIL	5010	SNN

1) Please complete the order code by adding the desired stroke length in mm.

Diagram dimensions in mm

## LIL 1010

## Linear Motion Unit



The Wrench LIN 9990 (page 149) is needed to adjust the eccentric roller

**Application**

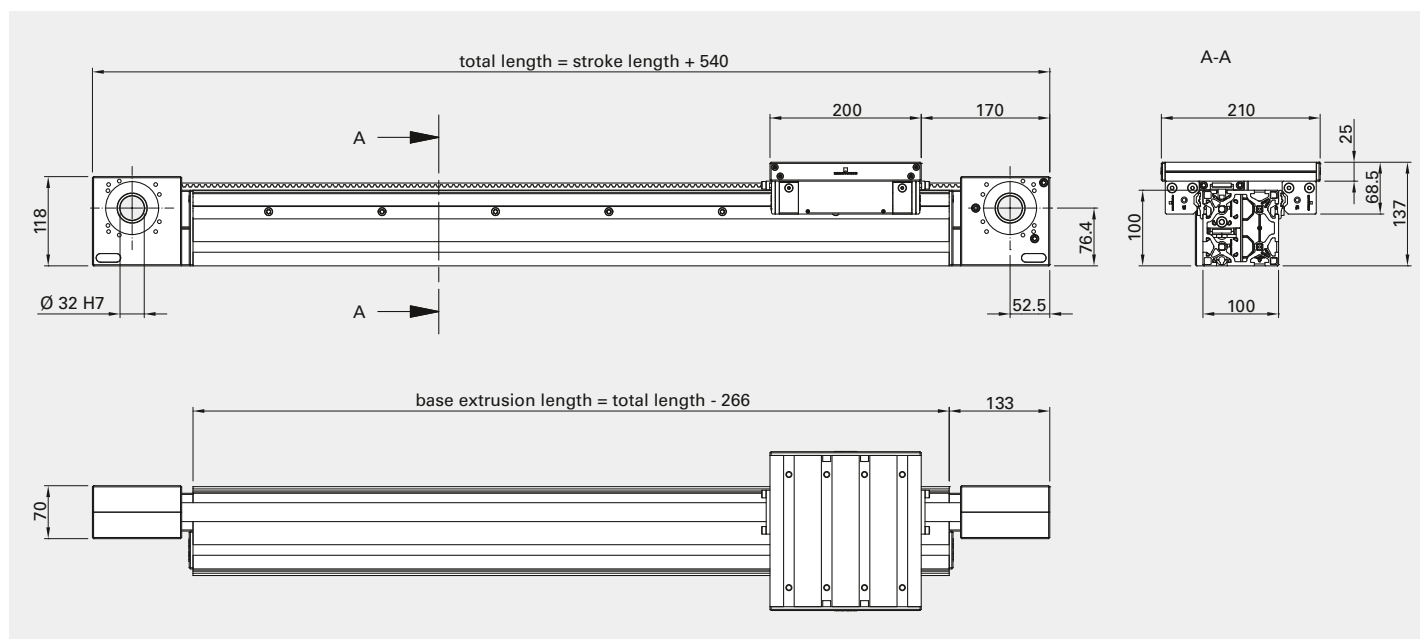
- For transportation and exact positioning of parts.
- Used as individual units or x-y-z gantries

**Technical Data**

Base extrusion: 100x100 PIL 1010  
 Standard carriage plate: 200x200 mm  
 Md max.: 60 Nm (max. transmittable drive torque)  
 Carriage stroke per revolution: 200 mm  
 Pitch circle diameter: 63.66 mm  
 Idle torque: 1 Nm  
 Positioning accuracy:  $\pm 0.2$  mm (without drive backlash)  
 Weight of carriage: 3.04 kg

**Assembly Instructions**

See page 181



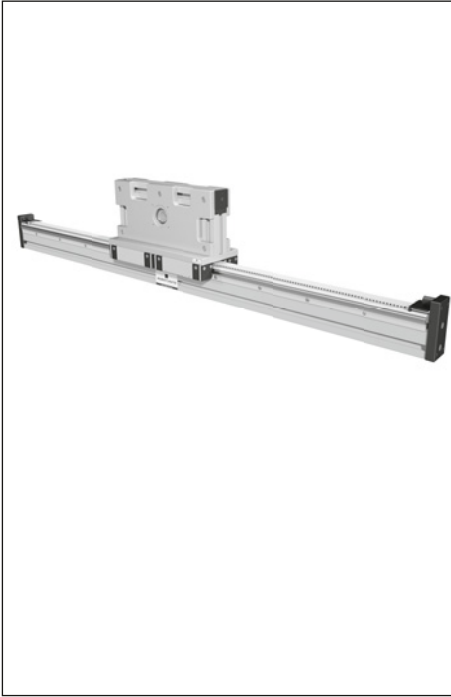
## Order Code

Description	Order Code <sup>1)</sup>		
	Base Extrusion	Type	Stroke Length
Standard Linear Motion Unit, Base Extrusion PIL 1010	LIL	1010	SNN

1) Please complete the order code by adding the desired stroke length in mm.

Diagram dimensions in mm



**Application**

- For transportation and exact positioning of parts.
- Used as individual units or x-y-z gantries

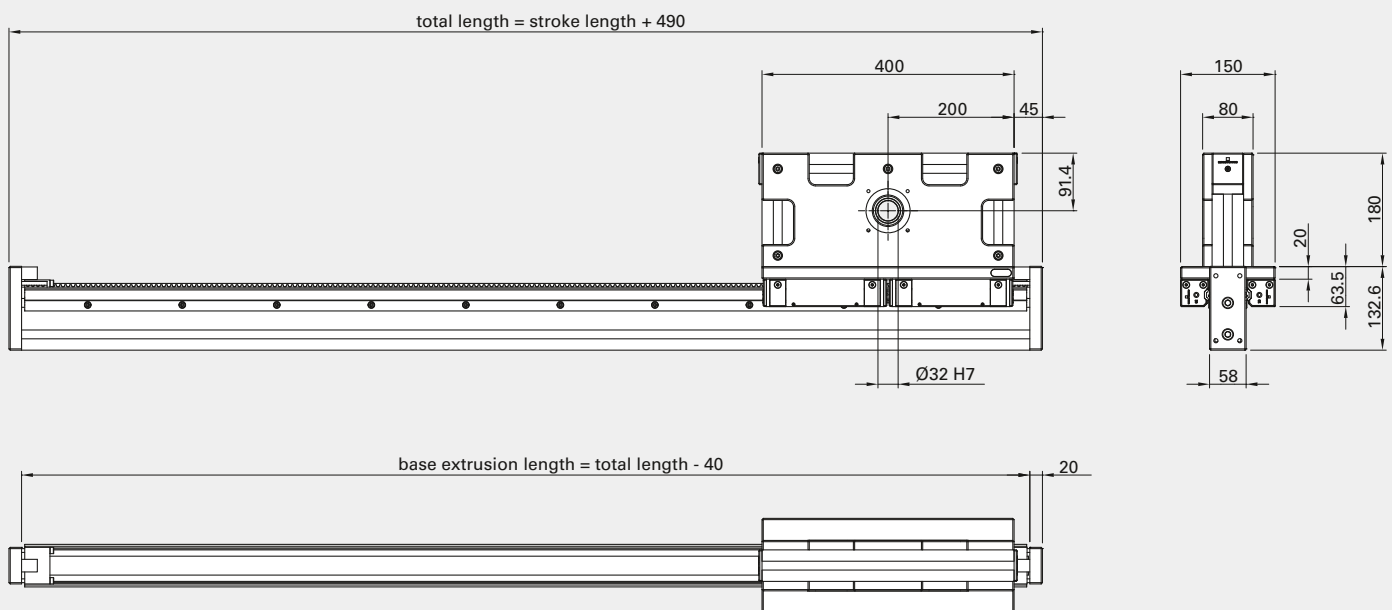
**Technical Data**

Base extrusion: 50x100 PIL 5010  
 Carriage Plate: 400 x 150 mm  
 Md max.: 60 Nm (max. transmittable drive torque)  
 Carriage stroke per revolution: 200 mm  
 Pitch circle diameter: 63.66 mm  
 Idle torque: 1 Nm  
 Positioning accuracy:  $\pm 0.2$  mm (without drive backlash)  
 Weight of profile incl. guiderail: 5.4 kg/m  
 Weight of right and left end parts: 1.2 kg  
 Weight of drive unit without motor: 15.0 kg

**Assembly Instructions**

See page 181

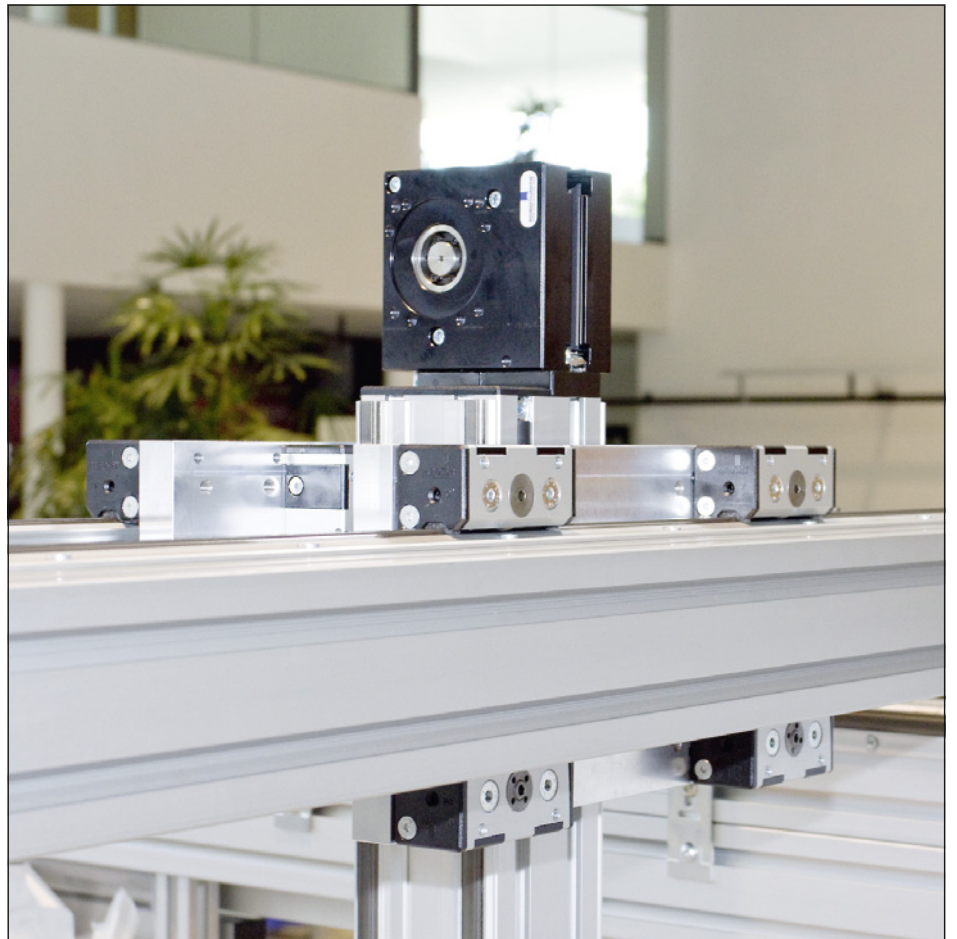
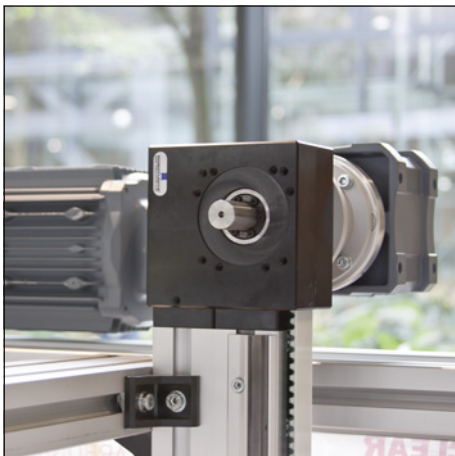
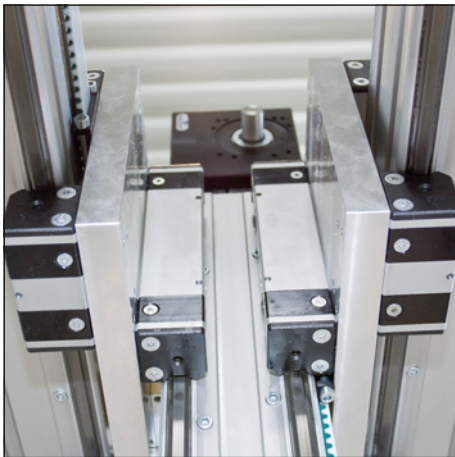
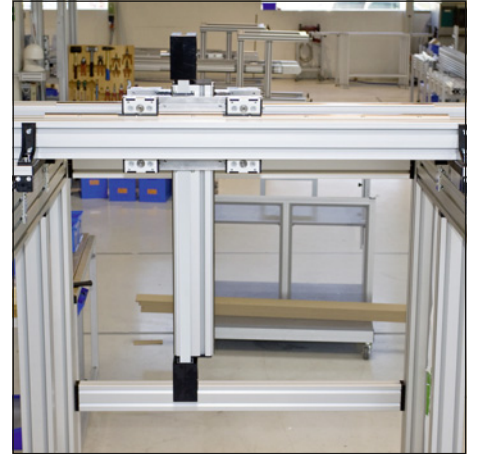
The Wrench LIN 9990 (page 149) is needed to adjust the eccentric roller

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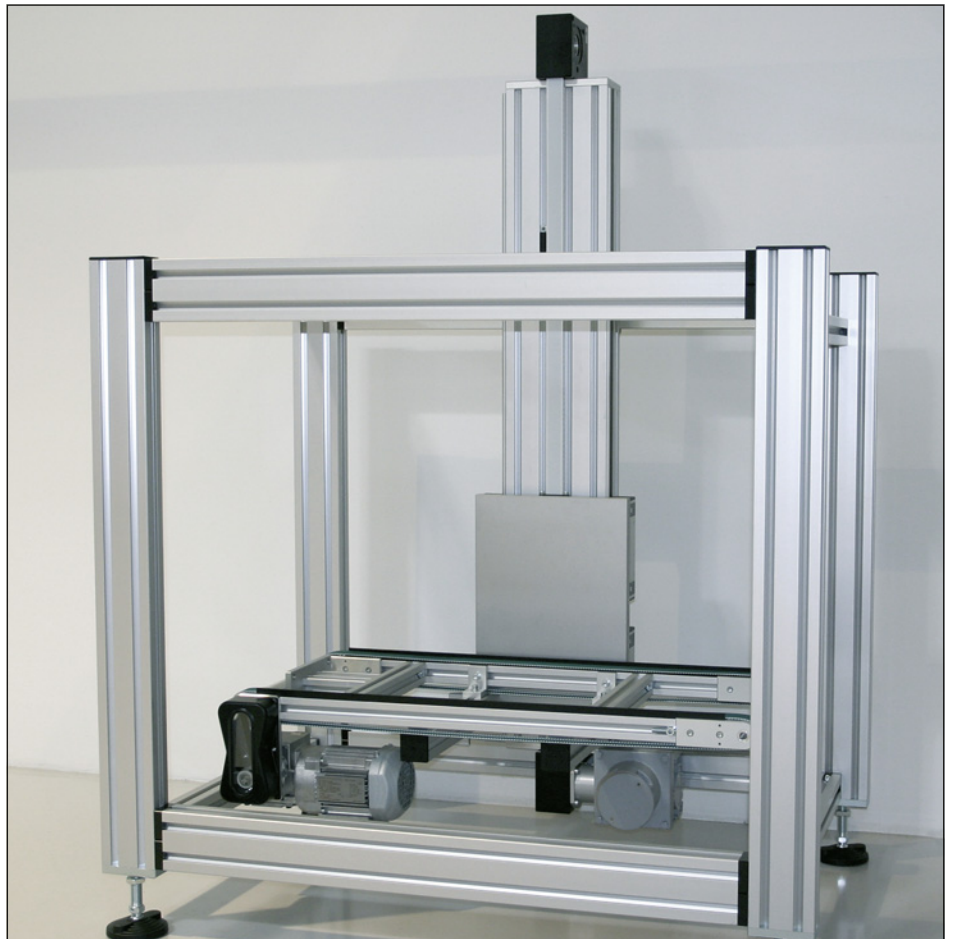
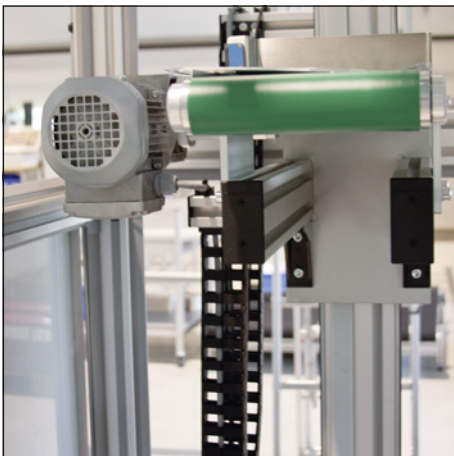
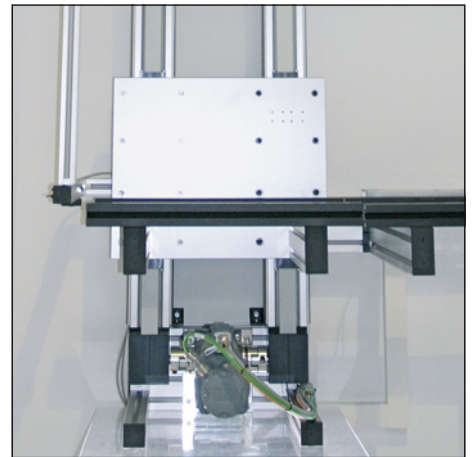
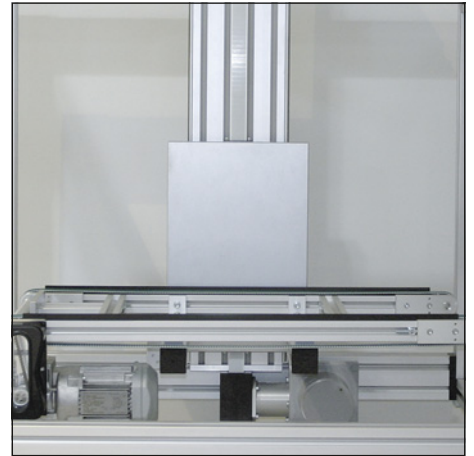
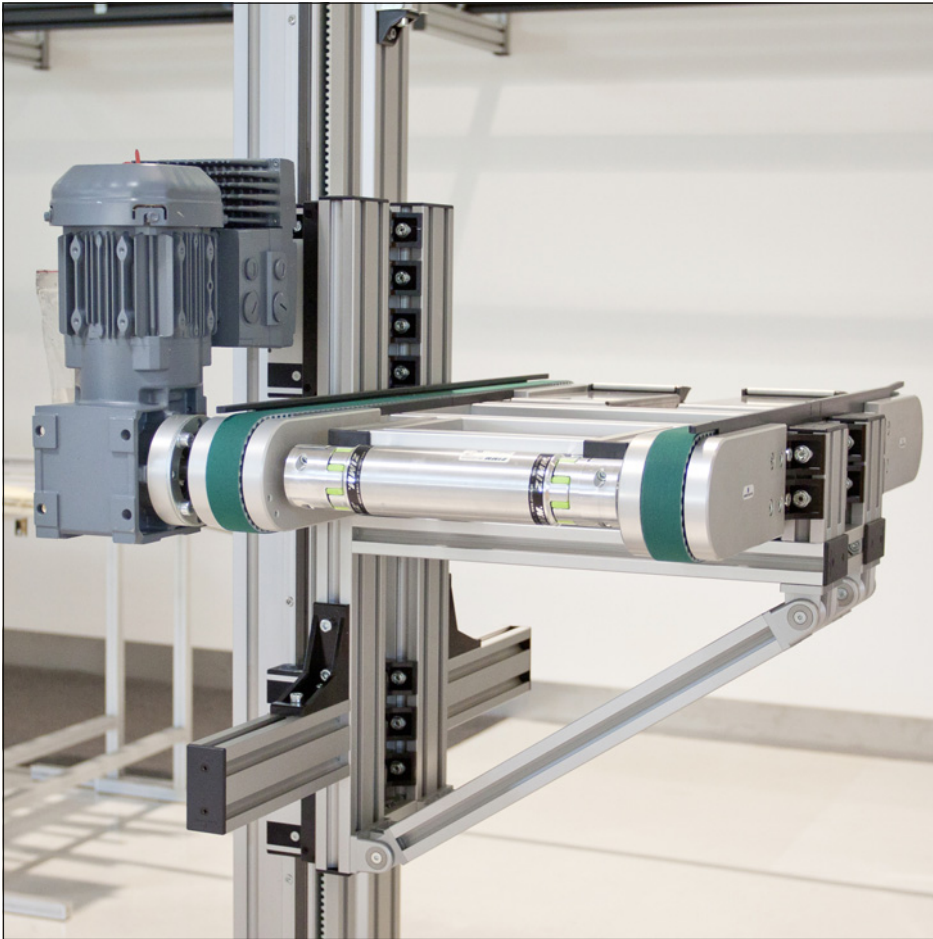
Description	Order Code <sup>1)</sup>		
	Base Extrusion	Type	Stroke Length
Linear Motion Unit with Omega drive	LOL	5010	SNN

1) Please complete the order code by adding the desired stroke length in mm.  
 Diagram dimensions in mm


# Linear Motion Unit Application Examples



# Application Examples Of Lift Station



# Lift Station Request Form

Company:	Contact Person:		Date:	
			Telephone:	
			Fax:	
Descriptions			Quantity: ..... piece(s)	
<b>General Technical Data</b>				
Carrier:	Fork <input type="checkbox"/>	Belt Conveyor (page 12) <input type="checkbox"/>	Modular Belt Conveyor (page 22) <input type="checkbox"/>	Timing Belt Conveyor (page 28) <input type="checkbox"/>
	Max. Load Capacity ..... kg		Acceleration: .....m/s <sup>2</sup>	
	Stroke ..... mm		Stroke Speed: .....m/min	
	Cycle Time .....sec.		Working Time: ..... hrs/day	
	Housing:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Safety Interlock:	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<b>Lift Station Dimensions</b>			
	Overall Width: .....mm		Upper Travel Extent: .....mm	
	Overall Depth: ..... mm		Lower Travel Extent: .....mm	
	Installed Height: .....mm		Positional Accuracy: .....mm	
	<b>Drive</b>			
	3-Phase Motor <input type="checkbox"/>		Servo Motor <input type="checkbox"/>	
	Rated Voltage: .....V		Frequency: .....Hz	
	<b>Load</b>			
	Parts To Be Conveyed:		Size Of Conveyed Parts: .....mm	
	Comment:	Sketch Of Center Of Gravity Of Parts:		

